Project Title: Bowhead Coastal Observation Project - Chukotka

Coordinator: John C. George Cyd Hanns, Research Assistant North Slope Borough Department of Wildlife Management PO Box 69 Barrow, Alaska 99723-0069

Field Period – 2010, 2011

Principal Investigators: John C. George North Slope Borough Department of Wildlife

Management (NSB-DWM), Barrow, Alaska;

Vladimir Melnikov, Scientist POI, Russian Academy of

Sciences

Eduard Zdor, Executive Secretary on behalf of

Association of Marine Mammal Hunters of Chukotka

(ATMMHC)

Gennady Zelensky, Executive director on behalf of Non-profit

Partnership Chukotka Science Support Group (CSSG) **Dennis Litovka**, Biologist on behalf of ChukotTINRO

Project summary:

Subsistence hunting of marine mammals is a vital cultural and nutritional resource to Alaskan and Chukotkan Natives. The NSB DWM has been involved in cooperative studies of bowheads and other marine mammals with Native (Eskimo and Chukchi) hunters in coastal Chukotka since the early 1990s. We have a particular shared concern regarding monitoring the population and health status assessment of large whales (gray and bowhead) harvested for subsistence, as well as for responding to concerns related to the International Whaling Commission (IWC) which is the international entity that provides aboriginal whaling oversight. The Chukotkan bowhead hunt is conducted through a bi-lateral agreement between the US and Russia.

This project focuses on continuing study of distribution and abundance of the Bering Chukchi Beaufort Seas bowhead whale population and documents marine mammal sightings off the coast of Chukotka.

The North Slope Borough Department of Wildlife Management is working closely with Native subsistence hunters, U.S. and Russian scientists to support coastal observations with documentation of bowhead and other marine mammals off Chukotka. Project management in Chukotka is led by ATMMHC in collaboration with the network set in place during the last 5 years funded by NMFS, NPS, and DWM. Project funding is transferred each year to Chukotka through ATMMHC who works closely with Dr. Melnikov, CSSG, ChukotTINRO, VIRO, the Russian Federation, and traditional hunters to plan and perform coastal observations off Chukotka.

As of January 2012, a full 2 years of funding will have been paid in full to ATMMHC for support of their project in Chukotka. To date, except for NSB administrative overhead, ninety percent of all funding resources from this grant have been used in Chukotka.

Fulfillment of Objectives

This project is designed to continue a productive partnership between Chukotka and Alaska in support of continued subsistence whale hunting as a vital cultural and nutritional resource to Alaskan and Chukotkan Natives.

The specific goals of this project are:

- a. Support continued collaborative work between the NSB DWM and Chukotkan colleagues of the Beringian area with focus on funding colleagues in Chukotka. Status: As of January 2012, a full two years of funding will have been paid to ATMMHC for support of project activities in Chukotka. To date, except for NSB administrative overhead, ninety percent of all funding resources from this grant have been used in Chukotka.
- b. Coastal observation documentation of whale species from designated sites (to be determined likely Uelen and Sireniki) along the Chukotka coast where bowhead whales are known to occur. Information on other marine mammals observed will also be documented.

Status: Two of the three year project is completed; annual field reports were received from ATMMHC (2010 and 2011) and are attached to this report. Data was delivered to Dr. Melnikov for final reporting and analysis. The observation areas are listed below by year. Partially due the new bowhead tracking data, a decision was made to establish the more northerly observation points for 2011.

2010 observation points: Sireniki, New Chaplino, Uelen, Neshkan. 2011 observation points: Nutepelman, Uelen, Neshkan.

c. Collection and sharing of bowhead samples for analysis, when possible, between U.S. and Russian laboratories.

Status: Seventeen bowhead whale genetic samples collected in Chukotka (Russia), during 2007-2010 were shipped to the US this fall as part of this sharing of samples for analysis. Specimens were shipped by D. Litovka, Whale Research Executive of ChukotTINRO.

d. Emphasis will be on reporting for large whales; however, as time and funding allow, further analysis may be done for all species contained in the dataset 1992-present (current analysis has been focused on bowhead whales).

Status: Two of the three-year project has been completed. Annual field reports were received from ATMMHC (2010 and 2011). Data were delivered to Dr. Melnikov for final reporting and analysis.

Budget related notes

As of January 2012, 2 years of field funding will have been paid in full to ATMMHC for support of ATMMHC project activities in Chukotka (2010 & 2011 NSB purchase orders to ATMHC).

Payments to ATMMHC were made by bank wire transfer. This is not a routine payment method for the North Slope Borough; however, this method was accommodated after we made a special request to our central accounting department.

2010 and 2011 ATMMHC Annual Field Reports:

THE ASSOCIATION OF TRADITIONAL MARINE MAMMALS HUNTERS OF CHUKOTKA

(English translation provided by ATMMHC)

Field report Coastal Observation Project 2010

Field studies in the spring and autumn 2010

1. Introduction

Project: Coastal observations of marine mammals CHAZTO and CSSG carried out in collaboration with scientists from ChukotTINRO and the Pacific Oceanographic Institute, FEB RAS for nearly two decades. During this time, scientists have optimized the guidelines and tables of observations, given that they will work sea hunters - the indigenous inhabitants. Journal of observations includes the basic parameters needed to determine the species of marine mammals, their numbers, directions of movement, the nature of the movement, describes the meteorological conditions (sea conditions, wind direction and force, ice conditions, etc.). See annex. Observers carried out searches from traditional places of observation of marine hunters near settlements (Cape, Hills) and document the information received at the end of the day of observation.

Completed logs are collected by the district coordinator, who, after adjustments and then transmit them by fax to the Anadyr office for a brief analysis (for management purposes) and further shipment to email the project supervisor Vladimir Melnikov. This year, we started to practice the transmission of reports directly from the observer to the Anadyr office. The effectiveness of this method will be determined on the basis of information project scientist Dr. Melnikov.

2. The work of coordinators and observers.

Observations in the Chukchi area were organized with the help of coordinator Nicolai Kalyanto. He has provided observers with guidelines, picked up the candidacy of an observer in the new village for project which is Neshkan. In Uelen our choice was to seasoned observer with whom we have been working for many years - Jacov Vukvutagin.

Observations in the Bering Sea, we have organized by coordinators Protopopova Natalia and Natalia Kalyuzhina, observer in the village of Sireniki spring was Oleg Rahtilkun, in autumn - Alexander Inmuge, in New Chaplin - Pavel Lyuneut and Maria Panauge, in Yanrakynnot - Arthur Apalyu.

Overall coordination of the monitoring was conducted by Eduard Zdor, and in his absence, Lilia Zdor.

Observers fill out the report briefly and clearly. The information recorded by them, clear and understandable, does not cause ambiguity and different interpretations.

3. Reports.

Reports are filled by observers in the field at the end of the day. Coordinator communicates with the monitors once a week or as needed. Once every two weeks by the observer is obliged

to transfer to coordinator or directly to the Anadyr office completed and signed Journal of observations.

Thus, as of December 15, 2010 all logs of observations submitted by email to scientific supervisor Vladimir Melnikov. Below is a brief description of the logged in observing information:

Chukchi Sea

Neshkan

<u>June</u>: The observer Rodion Rinetegin began work on June 15. Ice on the sea was 100 percent, but at the end of the month in some places there was water, breeding lagoons and near the lagoon neck and 4-5 km from the shore fast ice appeared. 1st bowhead was recorded on 29.06.

<u>July</u>: Until mid-July, the sea near the shore was covered with ice, July 9, the ice went away from shore and then cover the area decreased initially to 70 and in the last week of the month to 50% (in connection with this Ice conditions observer recorded only the seals).

<u>August</u>: The Sea, finally cleared of ice, but whales are still recorded in small amounts and very far from shore. So 08/07 to 25 km distance from shore was found 3 groups of bowhead whales of 3 individuals in each group. Approximately at the same venue on the day the hunters reported seeing six narwhal, moving westward at a distance of 35 km from the coast.

<u>September</u>: Observations began on September 15, the sea was ice-free and within a few days observer recorded on a daily basis feeding of bowhead and gray whales (10-20 individuals) at a distance of 5-10 km from shore. September 17, hunters from the village have harvested a female bowhead whale, the body length of 12 meters (Observer took a genetic test). Another biopsy specimen was taken by observer at sea from live whale. Since September 20 the storm began, which ended only in October.

October: The first half of the month was also inconvenient for observation because of the sea were constantly drifts. In the second decade of the month after the onset of good weather observer recorded every day of 5-10 bowhead and gray whales on the horizon line. October 14 saw three Minke whales, which moved to the east. From October 15 the sea was closed again with breakers, in the rare days when it became quieter (10/22, 10/27, 10/29) was seen on the horizon 1-2 Fountain of gray whales. October 19 at 15 km to the east and on October 26, 10 km west of the village carcasses of gray whales washed out on the beaches by the storms, killed by the killer whales.

November: From 1 to 7 November, the sea was in storm that stopped due to the formation of sludge. Prior to this, on November 5, two beluga whales washed out on beach. From 8 to 10 November there were several large groups of bowhead whales (up to 20 individuals) and 1-2 gray whales. From 16 to 22 November, the south wind blew, at times very strong, but the sludge still remained on the sea. 19th to end months on almost daily basis recorded bowhead whales sometimes in large groups, for example on November 19 20 bowheads were recorded at the same time and on November 24 a group of 10 bowheads, was spotted. The main direction of movement to the east, only on 25 of Nov. 2 bowheads moved to the west.

<u>December</u>: Sea in sludge, periodic southerly winds open the sea, but the constant bad weather did not allow to observe. December 15 observations were completed.

Uelen

<u>May</u>: The observations started on May 15. Throughout May the ice was moving back and force from the coast, in general, we can estimate that at least 9 days, covering an area of ice ranged from 30 to 60 percent. In those days the observer recorded the feeding belugas and whales and he assumes, they cannot go north because of the solid ice in the north-east. Beluga whales in this period were especially numerous. On 05/15 220 recorded species, 05/18-19-150, 120 belugas, 05/24-110 belugas. The first bowhead whale observers spotted on 05/24 and they moved to the Bering Strait and in the next few days watching 1-3 bowhead whale is moving north. In a footnote Observer wrote that belugas for the first time appeared in the Bering Strait in March, they were also seen in April.

June: In early June, there was bad weather, but after improving from June 4, gray and bowhead whales appeared, which were in small groups 1-4 moving north, but on June 6 11 bowhead whales were recorded. June 10 fast ice took off from the shore. June 12 observers recorded the passage of 12 killer whales from the east to the Bering Strait. In the second half of June, bowhead whales are no longer detected. Met on 1-2 gray whales a day. June 27 two humpback for a few hours fed near the shore, and humpback was lonely moving toward the Bering Strait. During this period, Uelen is spring hunting for walrus and all the hunters indicated that whales were scarce. June 25 two boats went to Lavrentia along the Bering Strait, and they reported seeing many whales from Powten to Nunyamo (exit from the Gulf of Lavrentia).

<u>July</u>: In the first half of July constantly had strong winds due to the breakers, the observations were hampered. Breakers have stopped with the return of ice, which sometimes covered up to 70% of the sea. 1-2 whales were spotted from the observation point on of July 1, 3 and 4. On July 9 the bowhead whale passed toward the Bering Strait. And only on July 10 from a boat in the Gulf of Lavrentia 15 whales have been spotted.

October: Practically, the entire first half of October, there was bad weather, heavy surf made it difficult to monitor. From 1 to 12 October as a result only a few walruses and seals were recorded. From 13 to 16 October, large groups of humpbacks fed and rested near the village (they jumped out of the water and beat their tails on the surface). On October 15th observers counted 40 humpbacks in the distance of 2-3 km. Many more humpback (in groups and in pairs) could be seen on the horizon, but counting was difficult. In those days, walruses are also passed by the village. The general direction of the gradual movement in those days for all species of marine mammals – to the Bering Strait, although some moved to the north.

Later the wind increased, and only from October 23 the opportunity emerged to watch a small group of gray whales. On 10/27 approximately 1000 beluga whales in large groups passed to the north. 10/29-30 observers have recorded a lot of humpback whales from 20 to 30 per day at a distance of up to 2 km from the coast. Because of the storm it was difficult to determine the exact types of whales that could be seen on the horizon. On this day, still about 700 beluga whales were moving in different directions along the coast, the storm washed up on shore many hooligan fish.

<u>November</u>: From 1 to 7 November, a strong storm waves occasionally reach the coastal village buildings. From 8 to 19 November, observed a large number of whales (gray, humpback, bowhead, and beluga whales), and almost no walrus. November 9 recorded 50 bowheads, the next day the 90 bowheads (feeding) and approximately 1000 beluga whales (all in one group went wide front to the north for 2 hours), 11/11 - 40 humpbacks and on 13, 17 and 18 of October – 200-300 belugas (fed and rested on the water and in sludge). All mammals have passed close to the shore, from 500 meters to 2 kilometers. Some are so close that it was possible to see the particular colors.

In the following days before the end of the month, there were not so many whales, beluga whales prevailed but not in such large numbers. On November, 28 50 bowheads were recorded,

and the next day 15. In the last days of the month multi-year ice appeared on the horizon with drifted walrus on it, once while on the umiaq we counted 1500 of them. On other days, despite the fact that the walrus was clearly more (they settled on the ice), counting was difficult. Then the weather really turned bad.

Observation period ended 30 November.

New Chaplino

April: Some technical difficulties have emerged with the introduction of an observer at a given location. Initially it was assumed that we will try to organize spring observations at Cape Chaplino, but it was not immediately possible. Since mid-April to mid-May observations were led by Pavel Lyuneut, to do his observations, he traveled to the edge, located far from the village and this created considerable difficulties because of the extra fuel costs and erratic weather. Second half of April the sea was covered with ice for about 80 percent, but by April 29 the ice away from shore, the same day, the observer recorded the passage of a bowhead whale. Two days before a big herd of belugas passed to the north. After that, only the seals and walruses were periodically recorded in the log observer.

May 5 five gray and a bowhead whale passed through in different directions.

From May 14 Maria Panauge started observations at Cape Chaplino. She said that until June 10, the sea was covered with ice up to 60%. The first 4 bowheads were recorded on May 18, they were feeding a dozen meters from the shore. And until early June, she only periodically spotted a gray whale everyday near the coast.

Only on June 5th the group of 3 and on June 5 five gray whales. The next group consisting of 3 gray whales passed by on June 23. The entire observation period was good weather, only periodically for a maximum of one day the fog descended.

Yanrakynnot

Due to the fact that observations at Cape Chaplino hampered for various objective reasons, we decided that the autumn observation is useful to conduct in the Senyavina Strait, and for this observer Arthur Apalyu of Yanrakynnot was hired. Apalyu for many years has been working for the Regional Park "Beringia", he is considered as one of the best rangers, observers of the park.

He began observations on October 14. The entire observation period the sea and the strait was ice-free and only in the last few days of November sludge formed in the Strait, but near the village, the sea was open to the end of observation period (December 15), the sludge is coming, then disappeared.

First gray whale was recorded on 10/19 and after that day 2 - 3 whales were spotted on a daily basis, except for storm days. October 30 and 31 observer wrote in a log book that a whale was scratching near the river mouth.

In early <u>November</u>, as in the north, was a strong northerly wind, which subsided by November, 8. During this time only on November 4 three bowhead whales were spotted, which were feeding at 1,5 km from the coast. After that, 1-2 gray whales were passing by for a few days near the place of observation toward the south-west.

Second half of November despite the fact that southerly wind periodically blew and sea conditions were good for the observations, there have been only 8 of bowhead whales (on 16, 19, 28 and 29 only 1 whale was seen, and on 23 – 4 whales). On November 28 there were 300 belugas recorded in the log. Seals recorded little, only on November 25 there was 23 ringed seals observed, and on November 29, 21 bearded seals. Walruses were practically not seen, despite the presence of a number of once a large coastal rookeries of walruses. The observer generally noted an anomaly in the fact that during the autumn storms there were no washed out dead walrus, which suggests that they probably were not on this area of the sea. In addition it

was surprised that in early November at Penkginee there were no bowhead whales, usually at this time of year there are tens of them grazing.

In the first half of December, despite the fact that the sea has not been free of ice, there has not been a single whale spotted. Only the seals were resting in the sludge, or floating at the edge of the ice. Observations finished on December 15.

Sireniki

The observer Oleg Rahtilkun started work on <u>April</u> 15. On the same day he recorded two bowhead whales (female with baby). As usual in the sea around Sireniki it wasn't completely covered with ice, the assessment area of ice was about 10%. The remaining days of April to mid-<u>May</u>, near the village were only beluga whales (04/15 – 50 individuals, 04/18— 27, 04/28— 11, and 04/30 – 300 belugas, 05/02 – approximately 700, and during other days 10-40 individual whales). In all cases, whales were a few hundred meters from shore. Only on 5/11 a gray whale passed by. In the second half of May, gray whales, one per day, were passing by the village more often. One bowhead passed by on May 17.

In June, the frequency of meetings with the gray whales remained at the same level, 1-2 whale passed by the village every other day within 0,5-1 km from the shore.

Spring observations ended June 15.

In <u>October</u>, to the observations began by Alexander Inmuge. The sea was ice-free the entire autumn period of observation. He recorded the not very significant number of walruses passing in different directions (1-2 day), as well as the rare gray whales. On 9 October 6 orcas were passing by within the 700 meters from the shore. Only on 10/18 three gray whales was recorded during the day and on 10/20 for the first time observed a bowhead whale. He saw on 10/25 two more humpbacks, and then storm started.

In <u>November</u>, the incidence of spotting of the bowhead whale increased, on 4, 6 and 8 of November, spotted one whale a day. In those days recorded by the passage of one gray whale a day, occasionally saw lonely walruses. By mid-November observations of bowhead whales became more frequent. For example on November 11-15 there were total 13 groups of 2-3 whales each recorded (once even 6), and 9 single whale. From Nov 17 to 22 there was a violent storm, thus observation was difficult. On November 24 four groups of 2-3 bowhead whale and 7 single whales were spotted, and also three gray whales passed. On Nov. 27 after a severe storm took place during the day there were 14 bowheads, 2 gray whales, and about 200 belugas passed by. On November 29 observers counted 413 belugas that were moving in different directions, at a distance from 5 to 100 m from shore.

Observation period ended November 30.

4. Collection of biological samples of bowhead whales. Information on the collection of biopsies for genetic analysis is in the report of the Denis Litovka - employee of ChukotTINRO (attached).

Appendixes:

- 1. Sample Log of observations.
- 2. Report by the ChukotTINRO scientist Denis Litovka
- 3. Photos of the observers.

Eduard Zdor ATMMHC Executive Secretary

OBSERVATION LOG

Yakov Vukvutagin_____Uelen_

Observer's name, village or basic area of the works

Date	Name of the place, coast, whale boat		Direction and force of wind		% of ice	Visibility	Cetaceans recorded			Pinnipeds recorded			Notes
							Quantity, species	Distance to coast	Direction of motion	Quantity, species	Distance to coast	Direction of motion	(meetings of females with cubs, killer whale hunting, stranded mammals, causes of their death)
15/10/08	Boat	8AM - 12PM	N	no	-	20 km	BW-26	5 km	S	Harp seal	3 km	fed	
16/10/08	Boat	8AM - 11AM	N-W	no	-	20 km	BW-20	2 km	S	Walrus - 40	3 km	fed	
17/10/08	Coast	10AM - 12PM	W	no	-	20 km	BW-15	2 km	S				
18/10/08	Coast	11AM - 02PM	S 5m/s	no	-	20 km	BW-65	3 km	fed				
19/10/08	Coast	10AM - 01PM	N 7m/s	Small waves	-	10 km	BW-9	1 km	S				
20/10/08	Coast	09AM - 12PM	N 10m/s	Average waves	-	10 km	BW-12	0.5 km	fed				
21/10/08	Coast	09AM - 12PM	N-W		-	20 km	BW-40	1 km	fed				
22/10/08	Coast	09AM - 12PM	N-W		-	20 km	BW-45	1 km	fed				

Report (2010) on activities under the joint Agreement between ChukotTINRO and North Slope Borough

- 12 samples were remotely collected (data base is attached) under the Federal Ministry of Natural Resources' permit #45 from August, 2nd 2007 and under the recommendation of Federal Service of Natural Resources Control # 50/07-k from May, 7th 2007;
- the Review of Chukotka Committee of Natural Resources of importance of the export and joint US-Russian investigation of Bowhead samples was received in January 31st of 2008 (attached) under the condition of receiving two more permits: from Federal Veterinary Service and Federal Agency on Transport and Export Control;
- 3. the recommendation of Federal Service of Natural Resources Control #060/08-c on exportation of 11 skin samples of Bowhead Whales from Russia to USA was received in November 5th 2008;
- 4. the approval of Federal Agency on Transport and Export Control was received (cannot provide the copy, because it is for internal use only);
- 5. the veterinary permit became very difficult to get in time more then 40-50 days, because the Vet Inspection was divided to 3 different agencies. We should send all papers to one Agency, which sends papers to Moscow Vet Inspection Agency, which reviewing our papers for a month or so. Then this Agency sends papers to Anadyr to Veterinary Division of Chukotka Department of Agricultural and Commercial Politics, which is issuing the international veterinary permit.

The problem with veterinary permit became actual only in 2008, so we and ChukotTINRO and ATMMHC were surprised and shocked to know this. Especially it was very difficult to understand the procedure, because there was beginning of formation of those 3 agencies-inspections: nobody knew their responsibilities and functions, were trying to send us to the other agency etc. We've sent papers to Moscow, but the answer came back after the CITES permit was expired.

Also there was a problem with Bering Air Company, which said that they do not have the Cargo license any more. But it wasn't the truth, because they were sending cargo in 2008. Maybe it was because of worldwide terrorist paranoia and biological samples were almost equivalent to biological weapon.

So, first of all we need to solve the problem with Bering Air. If they decline to send samples as cargo, we'll need to create a plan or to find the valuable person, which will agree to bring samples across the border, of course with our support at Customs and other special services.

Second. Before I send all papers to proceed export CITES permit in Moscow I should have in hand actual or almost expiring IMPORT CITES permit. And I should be assured that this or another IMPORT permit will be postponed/prolonged till the period of time of receiving EXPORT CITES permit.

Cheers,
Dennis Litovka
Scientific coordinator of the project
Whale Research Executive of ChukotTINRO

THE ASSOCIATION OF TRADITIONAL MARINE MAMMALS HUNTERS OF CHUKOTKA

Field report Coastal Observation Project 2011

Fall/Spring field studies 2011

1. Introduction

Project: Coastal observations of marine mammals was conducted by ATMMHC and CSSG in collaboration with scientists from ChukotTINRO and the Pacific Oceanographic Institute, Far East Branch Russian Academy of Science for last two decades. During this time, scientists had developed the manuals and tables for observations, considering that marine mammal hunters, indigenous people will use those observation forms for observations. A journal of observations includes the basic parameters needed to determine the species of marine mammals, their abundance, directions of movement, the nature of the movement, describes the meteorological conditions (sea conditions, wind direction and force, ice conditions, etc.). See annex. Observers carried out observations from traditional places of observation of marine hunters near settlements (Capes, Hills) and documenting the information received by end of the day of observation.

Completed observation forms were collected by the regional coordinator, who is adjusting information and sending them to Anadyr office via FAX for a brief analysis (for management purposes) and further e-mailing them to the project scientific advisor Vladimir Melnikov. This year we start using e-mailing reports directly from the observer to the Anadyr office. This year some observers sent their reports directly to Anadyr office (Neshkan and Nutepelman).

2. The work of coordinators and observers.

Observations in Chukotka Region were organized with the help of coordinator Nicolai Kalyanto. He has provided observers with guidelines and hired a new observer from the village of Inchoun. Jacov Vukvutagin was the observer in Uelen (the best observer in Vladimir Melnikov opinion). Rodion Rinetegin was the observer in Neshkan.

The observations in Iultinsky Region were conducted by the coordinator from Anadyr office Elena Krut'. Viktoria Penet, a leader of the local Native Community of the village of Nutepelman helped us to find a new observer for the village. It was David Tynarentiyat.

The supervision of the work at all was conducted by Edward Zdor and when Edward was out of Chukotka, Elena Krut' was taking care of project.

Observers fill out the report briefly and clearly. The information recorded by them, clear and understandable, does not cause ambiguity and different interpretations.

3. Reports.

Reports are filled by observers in the field at the end of the day. Coordinator communicates with the observers once a week or more as needed. The observer had to send his observation report one time for two weeks to regional observer or directly to Anadyr office.

All observation journals and reports were sent to Dr. Melnikov via e-mail by the December 15.

Below is a brief description of the logged in observing information:

Uelen

<u>April:</u> The observations started on April 15. Second half of April the sea has been covered by ice. Only on April, 27th ice has moved from coast, the same day Belugas (approximately 60) were observed, bearded and ringed seals.

May: The first 10 days ice moved at the same place.

On May, 11th the strong southern wind has cleared the sea from ice – covered area is about 40 %.

From May, 16 till May, 25th the observer daily observed 2-12 Bowhead whales, and occasional Gray whales.

Because of the worsened weather in Uelen area, observers moved to Cape Peek and observed migration of 7-10 Bowhead whales which daily were going north and it was daily documented.

Small groups of walruses on dense drifting ice have been found only on May, 30th.

<u>June</u>: In first half of June on the sea the ice density has made approximately 20-40 %, and to the middle of June has reached about 80 %.

Only on June, 2nd has passed 2 Bowhead whales, at the same day 3 Gray whales passed by.

The observer finished spring observation on June, 15.

<u>August</u>: On August 1-3st, the sea has been still covered by ice on which had many walruses and seals (ringed, larch and ribbon seal). And also the observer documented 1-2 Gray whales daily.

On August 7th, observed the big group of gray whales (20), paired.

In second half of August the observer documented walruses. One day he observed killer whales hunting walruses, which had to move out ashore.

On August, 28th and 29 the observer saw 15 and 7 humpback whales. Periodically they stopped and fed for some hours.

<u>September</u>: From September, 1 until September, 4th humpback whales continue to migrate, from 2 to 15 in day. Then the big storm has begun.

Since September, 10th the observer had seen many polar bears who fed near cape Peek (walrus haulout).

The second half of September the strongest storm continues. Strong breakers made observation impossible. Only walruses form temporary coastal haulouts.

October: All period near village were fed the big groups of humpback whales. On October 3, the observer has counted 40 humpback whales on a distance of 2-3 km, and on October, 20th 32 humpback whales had a rest. A considerable quantity of humpback whales (groups and pairs) could be seen on horizon, but calculation has been complicated.

The same days walruses also passed by the village.

The plankton was directly on a surface and whales slowly swam with open mouths.

Also were few Gray and beluga whales

<u>November</u>: From November, 1 until November 2nd, a strong storm, wave from time to time reach coastal structures of village.

Since November 3rd, a considerable quantity of a beluga whale: from 30 to 300 (11/11) which moved that on the north that on the south was almost daily observed. Gray and humpback whales were occasionally observed.

In second half of November were Bowhead whales, groups from 3 to 8, whales were fed, in the end of November they have gone to the south.

Observation period ended 30 November.

Inchoun

<u>June</u>: Observer Evgeny Sivsiv has started work on June 1st. Ice covered the sea from 70 to 40 percent to the middle of month. 2 Bowhead and 1 Gray whale have been observed on June 1st.

Then the observer saw only seals and only 7 walruses on June 7th.

In second half of June the sea was cleared from ice and 1-6 gray whales were daily observed.

On June, 21st it is observed 12 killer whales, according to the observer they were full, went very slowly.

Beluga whales appeared only once on June 25.

<u>July</u>: the sea near coast has been slightly covered by ice to the middle of July, which then has been cleared away by a southern wind. However in some days the ices returned again and occupied to 50 % of the area of the sea until the end of a month.

In second half of month there was mainly bad weather (fog), therefore observation have been complicated. 1-3 gray whales were daily observed.

Three times (05/07 16/07 and 24/07) have been noticed 4 killer whales.

From July 8 until July 12th, observed daily 3 to 8 humpback whales. Whales were fed.

By the end of month 3-4 humpback whales appeared daily.

<u>September</u>: Observations began on September, 1st, the sea was free from ice and during several days the observer daily saw feeded gray whales (1-3) on a distance of 0,5-6 km

from the coast, except those days when were storm. Approximately the half of the month the weather was also inconvenient for observation because the sea was stormy.

October: First half of month the weather was much better, and the observer daily saw 2-4 humpbacked and gray whales near the coast.

On October, 10th observed 3 killer whales moved on the east.

In second half of October when there was no storm the observer daily saw 5-10 humpback whales and no Gray and Bowhead whales

Observation period ended on November 30.

Neshkan

July: Observer Rodion Rinetegin has started work on July 1st.

Ice covered the sea of 60 percent; in the end of a month its density has decreased at first to 40, and last two days to 10 percent. All this time for the sea ringed seals prevailed.

The first big group of bowhead (at first three, and then 5 more) was observed on July 9 far in the sea (20 km from coast) during hunting.

The Bowhead whales were observed only during hunting at a great distance from coast (on July, 18, 21st and 27).

Only on July, 31st 2 gray whales have been observed.

<u>August</u>: The Sea, finally cleared off ice, but whales are still recorded in small amounts and very far from the shore.

On August 9 to 11th in 8-16 km from coast the observer has seen 2-3 gray whales. Approximately in the same place in that day hunters have informed that saw 3 killer whales, which successfully harvested a gray whale.

On August, 26th the observer has seen three, and then one gray whale.

Next day about 45 km of village to the east of Neshkan 4 carcasses of gray whales have been found.

<u>September</u>: The Sea was free from ice, but whales practically weren't seen but small groups of walruses occasionally observed.

In second half of September periodically was a stormy weather, and the observer received messages on the thrown out carcasses of marine mammals. 20 September about 80 km West from Neshkan has thrown out a carcass of killer whale, 21 September in 25 km West from Neshkan has thrown out a carcass of Minke whale.

When weather was good the observer saw at first gray, and then Bowhead whales. Whales moved as a small groups. Huge mass of plankton was on a sea surface, many seagulls ate it.

October: First half of month isn't by frequent occurrences of the Bowhead whales – daily the observer saw 5-10 Bowhead whales and 2-3 gray whales. On October, 5-8th groups 34, 25, 54 and 16 Bowhead whales have been observed. Then their daily quantity changed in from 2 to 16 whales. A movement direction was in different ways. On

October 3, and 8 the observer have taken 2 samples of the Bowhead whale by a method of a biopsy with spear use.

On October 13the blind female of walrus was moving alone along coast and was harvested. The walrus was butchered and used for food.

In second half of month basically was a stormy weather, the observer daily saw about 5-10 Bowhead whales and occasionally 1-2 gray whales. Storm regularly washed walrus carcasses ashore of, and also the hyposthenia walruses were moving on a coast.

Observation period ended October 30.

Nutepelmen

July: Observer David Tynarentiat has started work on July 1st.

Ice covered the sea for 50 percent and only on the second half of the month its density has decreased, at first to 20 percent, and last four days has disappeared absolutely. All this time for the sea prevailed bearded seals and ringed seals. Only on July 29th near the coast there was the first gray whale moving West.

<u>August</u>: The Sea, finally cleared off ice, but whales are still recorded in small amounts and very far from the shore. So on August 7th on distance of 10 km from coast a 1 gray whale was found. On the next two days one more single gray was observed who somersaulted in 200 meters from the coast.

On August 10-11th near Koljuchin Island a 2 groups of walruses approximately on 300 species were observed . Approximately 1000 walruses appeared in this place on August, 20, 21st and 29.

A 1 gray whale the observer had seen on August, 20th and 29

<u>September</u>: The Sea was free of ice, but whales practically were not observed; only occasionally near Koluchin Island there were groups of walruses.

On September 3rd and 1th a 1 gray whale was observed, and on September 12th, approximately 900 walruses were near the island.

In second half of September a stormy weather was often and the observer did not made any record about sea mammals.

Observation was ended on September 30th...

4. Collection of biological samples of bowhead whales.

Information on the collection of biopsies for genetic analysis will in the report of the Denis Litovka - employee of ChukotTINRO.

Appendixes:

- 1. Sample Log of observations.
- 2. Photos of the blind walrus.

Eduard Zdor

ATMMHC Executive Secretary